

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001526**Date Inspected:** 18-Feb-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 600**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Fu Yu Hong**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

CALTRANS Quality Assurance (QA) Inspector, Alfredo Acuna was present for the fabrication scheduled for this project at the ZPMC facility in Shanghai, China for the San Francisco Oakland Bay Self Anchored Suspension Bridge.

Production Monitoring test (PMT) and Fabrication

The QA inspector performed random fit -up verifications to the PMT coupons and Deck Panel DP-57 at the junction of the U-ribs to deck plate, The QA found that U-ribs fit-up appeared to be in compliance with the contract documents.

However the U-rib bevel surface had sign of rust, fins and tearing. ZPMC had been notified of these issues but ZPMC had not made proper corrections on the preparation of the bevel surfaces.

The QA inspector witnessed the welding operations at the PMT at the junction of the 800 mm U-ribs and the deck plate.

The PMT started at approximately 0840 hours. The QA inspector observed welding operators Han Chang Hou welder ID # 059464, Chen Jie ID # 059468, Gao Xin Dong ID # 059361, Jian Ting Guang ID # 062265, Zhao Cheng Shuang ID # 059400 and Yuan Fen Chuan ID # 059355 performing welding operations on the root pass weld joints # 1 thru 6 respectively with the automatic Gantry Lincoln machine with the gas metal arc welding (GMAW) process on the metal transferring with spray transfer mode following the(WPS)WPS-B-T-2342-U1(Urib).

ZPMC had approximately one (1) control panel Operator, six (6) Welders, five (2) QC inspectors, two (2) QC representative, two(2) Supervisor and six (6)Grinders. ABF representative Mr.Warren Buelher , ZPMC representatives Mr. Lay Tao and Caltrans representatives Mr. Robert Cuellar, Mr. Alistair Melville, Mr. John Kinsey, Mr. Ady Velasco and Mr. Bruce Berger were present at the OBG fabrication shop.

WELDING INSPECTION REPORT

(Continued Page 2 of 2)

ZPMC certified welding inspector Sun Wei performed visual weld inspection to the root pass. ZPMC found that welds were in accordance with the contract documents.

The cover pass and the PMT was welded sub sequentially with the submerged arc welding (SAW) process following the WPS-B-T-2322-U1 (Urib). The QA inspectors performed random verifications for the amperages, voltages and travel speed with the assistances of Caltrans representatives Mr. Greg Bertlesman and Mr. Paul Dawson. The welding parameters recorded by the QA inspector appeared to be in general compliance with the contract documents.

However, Mr. Greg Bertlesman found that preheat temperature at end of panel was below the minimum preheat temperature required on the WPS. See Mr. Greg Bertlesman TL_6031 generated on this date for more detail.

Note: ZPMC proceed welding the root passes and cover passes from deck panel DP-57 without finishing with the PMT coupons at ZPMC's risk.

The welding operators welding on the production deck panel DP-57 were as follows:

Weld joint (WJ) # 1 and 3, Han Chang Hou, WJ # 2 and 4; WJ # 5 and 7 Gao Xin Dong; WJ # 6 and 8, Jiang Tin Guang, WJ # 9 Zhao Cheng Shuang and WJ# 10 Yuan Fen Chuan and the control panel operator was Li Xi De Caltrans QA Inspectors were directed to perform visual inspection (VT) of the completed deck panel DP-15 and DP-58 closed rib PJP groove welds. This information was requested at 1045 hours and all visual data was provided at approximately 1425 hours. Two Task Leaders and three QA Inspector's teamed to complete the visual inspections. The QA inspector performed visual inspection to the welds # 1 thru 7 for the deck panel DP-15.

Summary of Conversations:

As noted above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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| Inspected By: | Acuna,Alfredo | Quality Assurance Inspector |
| Reviewed By: | Cuellar,Robert | QA Reviewer |
